Glossary

AFRL - DoD's Air Force Research Laboratory

AHRQ - HHS's Agency for Healthcare Research and Quality

ANL - DOE's Argonne National Laboratory

ARC - NASA's Ames Research Center

ARDA - Advanced Research and Development Activity (superseded by the Disruptive Technology Office)

ARL - DoD's Army Research Laboratory

ARO - DoD's Army Research Office

ARSC - Arctic Region Supercomputing Center

ASC - DOE/NNSA's Advanced Simulation and Computing program (formerly ASCI, for Accelerated Strategic Computing Initiative)

BIRN - NIH's Biomedical Informatics Research Network

Black Widow - NSA-supported next-generation (2007) system in the X1/X1e massively parallel, vector-processing system line

BlueGene - A vendor supercomputing project dedicated to building a new family of supercomputers

BlueGene/L - Scalable experimental new supercomputing system being developed in partnership with DOE/SC and DOE/NNSA; expected to achieve 300-teraflops+ processing speeds

BlueGene/P - The next generation in the BlueGene line after BlueGene/L

CaBIG - NIH's cancer Biomedical Informatics Grid

CAIDA - Cooperative Association for Internet Data Analysis

CAREER - NSF's Faculty Early Career Development Program

CENIC - Corporation for Network Initiatives in California

CENTCOM - DoD's United States Central Command

CG - Coordinating Group

CHEETAH - NSF's Circuit-switched High-speed End-to-End ArcHitecture network

CIIP - Critical Information Infrastructure Protection

CIO - Chief information officer

CMS - HHS's Centers for Medicare and Medicaid Services

COPs - Communities of practice

CSIA - Cyber Security and Information Assurance, one of NITRD's eight Program Component Areas

CSTB - Computer Science and Telecommunications Board of the National Academies

DARPA - DoD's Defense Advanced Research Projects Agency

DDDAS - Dynamic Data Driven Applications Systems

DETER - NSF- and DHS-initiated cyber DEfense Technology Experimental Research network

DHS - Department of Homeland Security

DLI - DoD's Defense Language Institute

DNS - Domain Name System

DOC - Department of Commerce

DoD - Department of Defense

DOE - Department of Energy

DOE/NNSA - DOE/National Nuclear Security Administration

DOE (OE) - DOE's Office of Electricity Delivery and Energy Reliability

DOE/SC - DOE's Office of Science

DOJ - Department of Justice

DOT - Department of Transportation

DRAGON - NSF's Dynamic Resource Allocation (via GMPLS) Optical Network

DTO - Disruptive Technology Office (formerly ARDA); budget reported through NSA this year

Eldorado - NSA-supported multithreaded system

EMIST - NSF/DHS Evaluation Methods for Internet Security Technology project

EPA - Environmental Protection Agency

ESCHER - Embedded Systems Consortium for Hybrid and Embedded Research, a joint effort of DARPA and NSF

ESMF - Earth System Modeling Framework

ESnet - DOE/SC's Energy Sciences network

ESSC - DOE/SC's Energy Sciences network (ESnet) Steering Committee

ETF - Extensible Terascale Facility

FAA - DOT's Federal Aviation Administration

FBI - Federal Bureau of Investigation

FDA - HHS's Food and Drug Administration

FISMA - Federal Information Security Management Act

FIU - Florida International University

FY - Fiscal Year

GALE - DARPA's Global Autonomous Language Exploitation program

GENI - NSF's Global Environment for Network Investigations

GEOSS - Global Earth Observation System of Systems, a cooperative effort of 34 nations, including the U.S., and 25 international organizations to develop a comprehensive, coordinated, and sustained Earth observation system

GMPLS - Generalized Multi-Protocol Label Switching

GSA - General Services Administration

GSFC - NASA's Goddard Space Flight Center

HCI&IM - Human-Computer Interaction and Information Management, one of NITRD's eight Program Component Areas

HCSS - High Confidence Software and Systems, one of NITRD's eight Program Component Areas

HEC - High-end computing

HEC I&A - HEC Infrastructure and Applications, one of NITRD's eight Program Component Areas

HEC R&D - HEC Research and Development, one of NITRD's eight Program Component Areas

HECRTF - High-End Computing Revitalization Task Force

HEC-URA - HEC University Research Activity, jointly funded by multiple NITRD agencies

HHS - Department of Health and Human Services

HPC - High-performance computing

HPCMPO - OSD's High Performance Computing Modernization Program Office

HPCS - DARPA's High Productivity Computing Systems program

HRI - Human-robot interaction

INCITE - DOE/SC's Innovative and Novel Computational Impact on Theory and Experiment program

Infiniband - A high-speed serial computer bus, intended for both internal and external connections

I/O - Input/output

IP - Internet Protocol

IPsec - IP security protocol

IPv6 - Internet protocol, version 6

IRS - Internal Revenue Service

ISI - Information Sciences Institute

IT - Information technology

ITR - NSF's Information Technology Research program

IT R&D - Information technology research and development

IU - Indiana University

IWG - Interagency Working Group

JET - LSN's Joint Engineering Team

JETnets - Federal research networks supporting networking researchers and advanced applications development

JPEG - An image file format developed by the Joint Photographic Experts Group

LANL - DOE's Los Alamos National Laboratory

LBL - DOE's Lawrence-Berkeley National Laboratory

LCF - DOE's Leadership Computing Facility

LSN - Large Scale Networking, one of NITRD's eight Program Component Areas

MAGIC - LSN's Middleware and Grid Infrastructure Coordination team

MAN - Metropolitan area network

MAX - Mid-Atlantic eXchange

MCNC - Microelectronics Center of North Carolina

MIDAS - NIH's Modeling of Infectious Disease Agents Study

MPEG-7 - Moving Picture Experts Group's multimedia content description interface, release 7

MPI - Message-passing interface

MTU - Maximum transmission unit

MURI - Multidisciplinary University Research Initiative

MW - Middleware

NARA - National Archives and Records Administration

NASA - National Aeronautics and Space Administration

NationalLambda Rail - Consortium of organizations working to provide an optical network for research

NCAR - NSF-supported National Center for Atmospheric Research

NCBC - NIH's National Centers for Biomedical Computing

NCS-A - DOE/SC NERSC's new computer system-A

NCS-B - DOE/SC NERSC's 7-TF new computer system-B

NCSA - NSF-supported National Center for Supercomputing Applications

NERSC - DOE/SC's National Energy Research Scientific Computing Center

NERSC-4 - DOE/SC NERSC's 9-TF SP3 computing platform

NERSC-5 - DOE/SC NERSC's planned next-generation (100-150 TF) platform

NIH - HHS's National Institutes of Health

NIST - National Institute of Standards and Technology

NITRD - Networking and Information Technology Research and Development

NLANR - NSF-supported National Laboratory for Applied Network Research

NLM - NIH's National Library of Medicine

NOAA - National Oceanic and Atmospheric Administration

NRT - LSN's Networking Research Team

NSA - National Security Agency

NSF - National Science Foundation

NSTC - National Science and Technology Council

NVLAP - National Voluntary Lab Accreditation Program, supported by NIST and NSA

ODDR&E - OSD's Office of the Director, Defense Research and Engineering

OMB - White House Office of Management and Budget

OMNInet - Large-scale metro optical network testbed supported by national labs, universities, Canadian organizations, and vendor partners

ONR - DoD's Office of Naval Research

ONT - Optical networking testbed

OptiPuter - NSF-funded five-year project to interconnect distributed storage, computing, and visualization resources using photonic networks

ORNL - DOE's Oak Ridge National Laboratory

OS - Operating system

OSD - Office of the Secretary of Defense

OSTP - White House Office of Science and Technology Policy

PCA - Program Component Area

PDA - Personal digital assistant

PET - OSD (HPCMPO)'s Programming Environment and Training program

PI - Principal investigator

PITAC - President's Information Technology Advisory Committee

PNL - DOE's Pacific Northwest Laboratory

PSC - NSF-supported Pittsburgh Supercomputing Center

Purple - DOE/NNSA ASC's 100-TF SMP supercomputing platform under development, in tandem with Blue Gene/L, at LLNL

QoS - Quality of service

R&D - Research and development

ROM - Read-only memory

RTOS - Real-time operating system

SAPIENT - DARPA's Situation-Aware Protocols in Edge Network Technologies program

SC - DOE's Office of Science

SCADA - Supervisory control and data acquisition

SciDAC - DOE/SC's Scientific Discovery through Advanced Computing program

SDP - Software Design and Productivity, one of NITRD's eight Program Component Areas

SDSC - NSF-supported San Diego Supercomputer Center

SEW - Social, Economic, and Workforce Implications of IT and IT Workforce Development, one of NITRD's eight Program Component Areas

SoD - NSF's Science of Design program

SP3 - 7-TF scalable parallel platform at NERSC

StarLight - NSF-supported international optical network peering point in Chicago

State - Department of State

TF - Teraflop(s), a trillion floating point operations (per second)

TIDES - DARPA-funded Translingual Information Detection, Extraction and Summarization program

Treasury - Department of the Treasury

TREC - Text REtrieval Conference

TRUST - NSF's Team for Research in Ubiquitous Secure Technology

TSWG - Technical Support Working Group

UCAR - University Corporation for Atmospheric Research

UIC - University of Illinois at Chicago

UIUC - University of Illinois at Urbana-Champaign

UltraScience Net - DOE/SC's experimental research network

UMd - University of Maryland

UNC - University of North Carolina

USGS - United States Geological Survey

USASMDC/ARSTRAT - U.S. Army Space and Missile Defense Command/Army Forces Strategic Command

UW - University of Washington

UWisc - University of Wisconsin

VA - Department of Veterans Affairs

V&V - Verification and validation

VM - Virtual machine

VPN - Virtual private network

WAN - Wide area network

Wi-Max - Worldwide interoperability for microwave access, a set of wireless standards

WLAN - Wireless local area network

WRF - Weather Research and Forecasting model, a next-generation mesoscale numerical weather prediction system developed collaboratively by Federal agencies

X1 - Scalable, hybrid scalar-vector high-end computing system developed with support from NSA and ODDR&E

X1e - follow-onFollow-on to the X1 (see Black Widow)

XT3 - Third generation of massively parallel processor (MPP) systems, following predecessors T3D and T3E